

10/501962

K 3125

13 DT09 Rec'd PCT/PTO 19 JUL 2004

ART 34 AMDT

Amended Claims

1. A conjugate suited for treating prokaryotic infections and comprising the following components:
 - (a) a transport mediator penetrating the prokaryotic cell membrane; and
 - (b) a peptide nucleic acid (PNA) to be introduced into the prokaryote and directed thereagainst, which inhibits the transcription of a prokaryotic gene.
2. The conjugate according to claim 1, wherein the prokaryote is a bacterium.
3. The conjugate according to claim 2, wherein the bacterium is a bacterium pathogenic for humans.
4. The conjugate according to any of claims 1 to 3, wherein the transport mediator is an antibacterial peptide or protein which can penetrate the prokaryotic cell membrane.
5. The conjugate according to any of claims 1 to 4, wherein the transport mediator comprises a phage-holin protein comprising one of the amino acid sequences shown in figure 3 or a fragment or variant thereof, which can penetrate the prokaryotic cell membrane.
6. The conjugate according to any of claims 1 to 4, wherein the transport mediator comprises a defensin.
7. The conjugate according to any of claims 1 to 6, wherein the peptide nucleic acid (PNA) is directed against a gene giving antibiotic resistance.
8. The conjugate according to claim 7, wherein the antibiotic resistance is a resistance to penicillin, ampicillin, kanamycin or tetracycline.

9. The conjugate according to any of claims 1 to 8, which has the following structure: transport mediator-spacer-compound to be introduced.
10. The conjugate or conjugate mixture according to claim 9, wherein the spacer is polylysine, polyglycine or poly(glycine/lysine).
11. The conjugate according to claim 9 or 10, wherein the spacer is linked to the transport mediator via a cleavable disulfide bridge.
12. The conjugate according to any of claims 7 to 11, wherein the peptide nucleic acid comprises the sequence H₂N-ATTGTTAGATTCAT-COOH.
13. A medicament containing a conjugate according to any of claims 1 to 12.
14. The medicament according to claim 13, further containing at least one antibiotic for which the prokaryote was re-sensitized by administering the conjugate.
15. Use of a conjugate according to any of claims 1 to 12 or the composition defined in claim 14 for treating a prokaryotic infection.
16. Use according to claim 15, wherein the prokaryotic infection is caused by a prokaryote which is resistant to at least one antibiotic.